

## 3 bro IPA

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **67**
- SRM **6.9**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

### Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**

### Mash step by step

- Heat up **19.3 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Sparge using **11.9 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4.5 kg (81.8%)	80 %	5
Grain	Viking melanoidynowy	0.5 kg (9.1%)	75 %	60
Grain	Strzegom Monachijski typ I	0.5 kg (9.1%)	79 %	18

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	20 g	60 min	15.5 %
Boil	Columbus/Tomahawk/Zeus	20 g	30 min	15.5 %
Aroma (end of boil)	Mosaic	15 g	10 min	10 %
Aroma (end of boil)	Centennial	15 g	10 min	10.5 %
Dry Hop	Centennial	15 g	7 day(s)	10.5 %
Dry Hop	Mosaic	15 g	---	10 %
Dry Hop	Warrior	10 g	7 day(s)	15.5 %
Dry Hop	Columbus/Tomahawk/Zeus	10 g	7 day(s)	15.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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Safale US-05	Ale	Dry	20 g	Fermentis
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